

Claims

1. A computer network system for facilitating a design of an end product, the computer network system comprising:

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a first software tool including one or more designs for the end product, the one or more designs encoded in one or more electronic formats;

a second software tool including Enterprise Resource Planning (ERP) software, the second software tool including one or more fields indicating actual costs incurred in design of the product;

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a third software tool supporting project planning for the end product, wherein the third software tool models a schedule for designing the end product;

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a monitoring engine, the monitoring engine including software in real-time communication with the first, second, and third software tools, such that the monitoring engine is operative to measure progress of design of the end product in view of the current state received from the first software tool, the second software tool, and the third software tool.

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2. The computer network system of claim 1, wherein the first software tool includes a standard computer aided design (CAD) tool.

25 3. The computer network system of claim 2, wherein the CAD tool is a hardware design tool, and the end product includes computer hardware.

4. The computer network system of claim 3, wherein the one or more electronic formats includes a hardware design language.

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5. The computer network system of claim 4, wherein the hardware design language includes VERILOG.
6. The computer network system of claim 1, wherein the end product includes a software product.
7. The computer network system of claim 1, wherein the monitoring engine measures a progress of the design of the end product towards completion.
8. The computer network system of claim 1, wherein the monitoring engine is further adapted to compare actual progress of design of the end product against planned progress of design of the end product.
9. The computer network system of claim 8, wherein the monitoring engine includes a metric for comparison of the actual progress against the planned progress.
10. A computer network system for monitoring a status of a product design, wherein the product design is encoded in one or more electronic formats, the computer network system comprising:
- a plurality of nodes arranged in a hierarchical order, wherein a plurality of nodes at a lowest level of the hierarchical order obtain data on the product design from a plurality of software resources, the plurality of software resources including an human resources tool, an issue tracking tool, and a project planning tool;
- a plurality of instruction primitives which may be executed in one or more of the nodes, the plurality of instruction primitives including an aggregate instruction for aggregating data received at the plurality of nodes, an extract instruction for retrieving data from the plurality of software resources, and an

rule instruction for applying a conditional clause to data received from one or more nodes;

5 an event monitor to trigger execution of one or more of the plurality of instruction primitives in one or more of the nodes in response to an event; wherein a single node at a highest level of the hierarchical order produces the status of the product design at the occurrence of the event.

10 11. The computer network system of claim 10, wherein the hierarchical order comprises a directed acyclic graph.

12. The computer network system of claim 10, wherein each of the plurality of software sources operates on a distinct server from a plurality of servers, the plurality of servers in communication via a network.

15 13. The computer network system of claim 12, wherein the network at least partially includes a local area network.

20 14. The computer network system of claim 12, wherein the network at least partially includes a wide-area network.

15. The computer network system of claim 14, wherein the wide area network communicates via TCP/IP

25 16. The computer network system of claim 12, wherein the plurality of nodes are distributed amongst the plurality of servers.

30 17. The computer network system of claim 10, wherein the event monitor is configured to detect asynchronous events.

18. The computer network system of claim 17, wherein the asynchronous events include an update to one or more of the software resources.

5 19. The computer network system of claim 10, wherein the event monitor is configured to detect synchronous events.

20. The computer network system of claim 10, wherein the single node at the highest level of hierarchy is in communication with a User Interface process, such that the status of the product design is displayed on the User Interface after
10 the occurrence of the triggering event.

21. The computer network system of claim 20, wherein the User Interface comprises a web browser.

15 22. The computer network system of claim 10, wherein the software resources include one or more of an ERP tool, an issue tracking tool, a project management tool, an EDA tool.

20 23. The computer network system of claim 10, wherein the product design is a hardware product design.

24. The computer network system of claim 23, wherein the hardware product design is for one or more integrated circuits.

25 25. The computer network system of claim 24, wherein the product design is encoded in a hardware design language.

26. The computer network system of claim 25, wherein the hardware design language is VERILOG.

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27. The computer network system of claim 10, wherein the product design is for a software product.

28. A method of monitoring an electronic design project, the method

5 comprising:

upon the occurrence of one or more triggering events, extracting parameters on the electronic design project from two or more software resources, the two or more software resources including an issue tracking tool, a project management tool, and an ERP tool;

10 in response to extracting the parameters, determining an actual development cost of the electronic design project;

upon extracting the parameters, determining an estimated cost of the design project;

15 from one or more of the extracted parameters, determining progress of the design project as a percentage;

comparing the actual development cost, as a percentage of the estimated cost, to the percentage of the progress of the design project.

29. The method of claim 28, further including:

20 displaying results of the comparing the actual development cost on a user interface.